## REMARKS

Upon entry of the forgoing amendments, claims 1-12 and 14-21 are pending in this application with claims 1, 11, 20, and 21 being independent claims. No claim is allowed.

Claims 1, 11, 20, and 21 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. Support for these changes may be found in the specification in FIG. 4 and paragraph 0026, among others.

The 35 U.S.C. § 102 Rejection

Claims 1, 20, and 21 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by *Lai et al.* (US 6,763,486 B2). This rejection is respectfully traversed.

Specifically, the Office Action states on page 3 of the Response to Arguments that "[t]he circuit [shown in FIG. 10] of the reference (*Lai*) is the same circuit claimed by the applicant (FIG. 4), and performs the same function." However, this is technically incorrect.

First, the circuit is not the same. On column 6, lines 18-21, with respect to FIG. 10, *Lai* discloses that "...two lines of one differential link are treated as independent single-ended lines and are sensed with boundary scan receivers $AUX_1$, $AUX_2$." The single-ended nature is emphasized by the use of fixed reference voltages "ref +" and "ref -", respectively, shown in FIG. 10. It should be noted that the "ref" voltage point shown between the interconnect lines is for receiver purposes and not for testing purposes, that is, the $R_X$ Input Buffer uses common mode. By contrast to the single-ended approach of the prior art, the embodiment of FIG. 4 and the claimed invention uses a "common mode reference voltage". This enables common mode noise rejection. *Lai*, on the other hand, would give erroneous results if the common mode noise was greater than the difference between the fixed reference voltages. Second, the function is not the same. It is not always true that the result of testing each line individually is the same as testing

the two lines together. One example would be the high common mode noise situation above. When the noise is high, the invention according to FIG. 10 of *Lai* would give a double failure on the boundary scan receivers $AUX_1$ and $AUX_2$ when in fact the $R_X$ Input Buffer may be able to read the data despite the noise.

Given the circuit and function differences, *Lai* can not be said to anticipate the currently claimed invention.

## The 35 U.S.C. § 103 Rejection

Claims 2-6, 8, 11-15, and 17 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Lai* in view of *Kim et al.* (IEEE 2001). Claims 7 and 16 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Lai* in view of *Kim* and further in view of *Ichie* (US 5,050,187). Claims 9, 10, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Lai* in view of *Kim* and further in view of *Koenemann et al.* (US 5,617,426). These rejections are respectfully traversed.

Generally, the Office Action states that *Lai* discloses or suggests most of the claim elements and limitations and that one or two of the other prior art references disclose or suggest the rest. However, the arguments presented above with respect to *Lai* apply equally here and are not rebutted by the additional references individually or in combination.

In view of the above, it is respectfully asserted that the claims are now in condition for allowance.

Request for Allowance

In view of the foregoing, reconsideration and an early allowance of this application are

earnestly solicited.

If any matters remain which could be resolved in a telephone interview between the

Examiner and the undersigned, the Examiner is invited to call the undersigned to expedite

resolution of any such matters. Please charge any additional required fee or credit any

overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,
THELEN, REID, & PRIEST LLP

Dated:  June 2, 2005

David B. Ritchie
Reg. No. 31,562

Thelen, Reid, & Priest LLP
P.O. Box 640640
San Jose, CA 95164-0640
Tel. (408) 292-5800
Fax (408) 287-8040